

P24: VOLATILE MOLECULES AND PHENOLIC PROFILE OF HEMP EDIBLE PRODUCTS

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The aroma and flavor that characterize the edible products of *Cannabis sativa* L. can be attributed to both flavonoids and volatile molecules. Such compounds are particularly important for the taste and aromatic characteristics. The volatile profile of a sample is one of the most appreciated properties and plays a key role in determining its perception and acceptability. Depending on their presence and amount, volatile compounds influence the organoleptic characteristics of food products as well as the sensorial perception, and are responsible for their unique flavor and aroma.

Many phenolic compounds impart specific fragrances and tastes to various products in which they are present, for example the fruity aroma and spicy flavor and bitterness characteristic of extra virgin olive oil.

Currently, the phenolic profile of the edible products of hemp chain and their volatile components have not been investigated. Therefore, in the present study the specific phenols and volatile profile of the products of food hemp chain were determined. Both the qualitative and the quantitative composition of the phenolic fraction were performed by HPLC analyses. The results obtained in this study showed that food hemp products contain significant amounts of polyphenols, especially flavonoids such as flavanones, flavanols, flavonols and isoflavones.

The volatile components of hemp seed, oil and flour samples, were analyzed by SPME-GC / MS, and the values expressed as RPA% (ratio relative to peak area and the total area). Identified compounds belonged to aldehydes, ketones, alcohols, acids, lactones and Terpenes (monoterpenic and sesquiterpenic components). The volatile compounds present in about 50% on the total of VOC were monoterpenes. The profile of the monoterpene components was very similar among the three types of samples, particularly inflour and seed samples, where the most abundant monoterpene was limonene, whereas in hemp oil was alpha and beta-pinene.